

**Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1991-2000**

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Field of study	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total										
Science and engineering, total .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total .....	21.7	22.0	22.4	22.2	22.6	23.2	22.4	21.7	20.6	20.5
Aeronautical/astronautical .....	.9	.9	.9	.9	.9	1.1	1.0	.9	.8	.8
Chemical .....	2.9	2.9	2.9	2.8	2.7	2.9	2.8	2.8	2.6	2.8
Civil .....	2.4	2.4	2.5	2.6	2.5	2.6	2.4	2.4	2.2	2.1
Electrical .....	5.8	6.0	6.1	6.4	6.5	6.4	6.3	5.9	5.7	5.9
Industrial .....	.7	.8	.9	.9	1.1	.9	.9	.8	.8	.7
Materials/metallurgical .....	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	1.8	1.7
Mechanical .....	3.6	4.0	4.0	3.9	3.9	3.9	3.7	3.8	3.3	3.3
Other engineering .....	3.4	3.0	3.0	2.8	2.9	3.3	3.1	3.1	3.3	3.1
Sciences, total .....	78.3	78.0	77.6	77.8	77.4	76.8	77.6	78.3	79.4	79.5
Physical sciences, total .....	15.1	15.3	14.5	15.2	14.5	14.1	13.8	14.0	13.8	13.1
Astronomy .....	.5	.5	.6	.5	.7	.7	.7	.8	.6	.7
Chemistry .....	9.1	9.0	8.4	8.6	8.1	7.9	7.9	8.1	8.2	7.7
Physics .....	5.4	5.7	5.5	5.9	5.6	5.5	5.1	5.0	4.9	4.6
Other physical sciences .....	.1	.1	.1	.1	.1	.0	.1	.1	.1	.1
Earth, atmospheric, and ocean sciences .....	3.4	3.2	3.0	3.1	2.9	2.9	3.2	3.0	3.1	2.9
Mathematics .....	4.3	4.3	4.5	4.3	4.5	4.1	4.1	4.3	4.2	4.0
Computer sciences .....	3.3	3.5	3.5	3.4	3.8	3.4	3.3	3.4	3.3	3.3
Biological sciences .....	19.4	19.4	20.0	19.9	20.3	21.0	21.2	21.4	21.5	22.5
Agricultural sciences .....	4.5	4.3	3.8	4.1	3.9	3.8	3.6	3.8	3.7	3.6
Psychology .....	13.5	13.2	13.4	12.9	12.9	12.8	13.1	13.5	14.1	13.9
Social sciences .....	14.8	14.6	14.8	14.9	14.6	14.7	15.1	14.9	15.7	16.0
Citizenship known										
Science and engineering, total .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total .....	21.7	21.9	22.2	22.2	22.6	23.1	22.7	21.6	20.5	20.2
Aeronautical/astronautical .....	.9	.9	.9	.9	1.0	1.0	1.0	.9	.8	.8
Chemical .....	2.9	3.0	2.9	2.8	2.7	3.0	2.9	2.9	2.6	2.8
Civil .....	2.4	2.4	2.5	2.6	2.5	2.5	2.5	2.4	2.3	2.2
Electrical .....	5.8	6.0	6.1	6.4	6.5	6.3	6.4	5.8	5.7	5.7
Industrial .....	.7	.8	.9	.9	1.1	1.0	.9	.8	.8	.7
Materials/metallurgical .....	2.0	2.0	2.1	2.1	2.2	2.1	2.2	2.1	1.8	1.7
Mechanical .....	3.6	4.0	4.0	3.9	3.8	3.9	3.8	3.7	3.3	3.3
Other engineering .....	3.3	2.9	2.9	2.7	2.8	3.3	3.1	3.1	3.2	3.0
Sciences, total .....	78.3	78.1	77.8	77.8	77.4	76.9	77.3	78.4	79.5	79.8
Physical sciences, total .....	15.1	15.4	14.6	15.2	14.5	14.0	13.8	14.0	13.8	13.1
Astronomy .....	.5	.6	.6	.6	.7	.7	.8	.8	.6	.7
Chemistry .....	9.1	9.0	8.4	8.6	8.1	7.8	7.9	8.2	8.2	7.6
Physics .....	5.4	5.7	5.5	5.9	5.6	5.4	5.1	5.0	4.9	4.6
Other physical sciences .....	.1	.1	.1	.1	.1	.0	.1	.1	.1	.1
Earth, atmospheric, and ocean sciences .....	3.4	3.2	3.0	3.2	3.0	2.9	3.2	3.0	3.1	2.9
Mathematics .....	4.3	4.2	4.5	4.3	4.4	4.1	4.1	4.3	4.2	4.1
Computer sciences .....	3.4	3.6	3.5	3.4	3.8	3.4	3.3	3.4	3.3	3.3
Biological sciences .....	19.5	19.7	20.2	20.0	20.4	21.2	21.5	21.7	21.9	22.9
Agricultural sciences .....	4.5	4.3	3.9	4.2	4.0	3.8	3.6	3.9	3.8	3.7
Psychology .....	13.4	13.1	13.4	12.8	12.9	12.9	12.6	13.2	13.7	13.7
Social sciences .....	14.8	14.6	14.8	14.8	14.5	14.6	15.0	14.9	15.6	16.1

See explanatory information, if any, and SOURCE at end of table.

**Table 4a. Percentage distribution of science and engineering doctorates awarded,  
by major field and citizenship status of recipients: 1991-2000**

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Field of study	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
U.S. citizens										
Science and engineering, total .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total .....	14.3	14.5	14.9	14.6	15.4	16.6	17.0	15.8	15.7	14.1
Aeronautical/astronautical .....	.7	.7	.8	.7	.9	1.1	1.0	.9	.6	.7
Chemical .....	2.4	2.2	2.2	1.9	1.9	2.0	2.0	2.0	2.1	2.2
Civil .....	1.2	1.1	1.1	1.3	1.3	1.4	1.5	1.5	1.6	1.4
Electrical .....	3.8	4.1	4.2	4.2	4.4	4.5	4.7	3.9	4.0	3.4
Industrial .....	.3	.4	.6	.6	.7	.7	.6	.5	.5	.4
Materials/metallurgical .....	1.4	1.4	1.5	1.4	1.5	1.6	1.7	1.6	1.4	1.4
Mechanical .....	2.0	2.4	2.3	2.4	2.5	2.8	2.8	2.7	2.5	2.2
Other engineering .....	2.4	2.2	2.2	2.0	2.2	2.6	2.7	2.7	2.8	2.4
Sciences, total .....	85.7	85.5	85.1	85.4	84.6	83.4	83.0	84.2	84.3	85.9
Physical sciences, total .....	14.5	14.8	14.0	14.5	13.8	13.3	13.2	13.2	12.8	12.0
Astronomy .....	.6	.7	.7	.7	.8	.9	.9	.8	.7	.8
Chemistry .....	9.2	9.1	8.5	8.5	8.0	7.5	7.7	7.9	7.9	7.1
Physics .....	4.6	4.9	4.7	5.2	4.9	4.9	4.5	4.3	4.1	4.0
Other physical sciences .....	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
Earth, atmospheric, and ocean sciences .....	4.0	3.5	3.1	3.3	3.1	3.0	3.3	3.1	3.0	3.0
Mathematics .....	3.2	3.1	3.3	3.3	3.6	3.1	3.3	3.5	3.4	3.3
Computer sciences .....	2.7	2.9	2.8	2.8	3.1	2.7	2.7	2.9	2.6	2.5
Biological sciences .....	22.7	22.9	23.1	22.6	22.6	22.7	22.8	23.1	23.1	24.9
Agricultural sciences .....	3.9	3.5	3.1	3.4	3.2	3.0	2.9	2.9	2.8	2.8
Psychology .....	20.2	19.9	20.6	20.1	19.9	20.0	18.9	19.6	20.1	20.1
Social sciences .....	14.7	14.9	15.1	15.3	15.4	15.6	16.0	15.9	16.6	17.3
Non-U.S. citizens										
Science and engineering, total .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total .....	33.8	33.3	33.4	33.1	33.1	32.5	32.2	31.3	29.2	30.8
Aeronautical/astronautical .....	1.1	1.3	1.1	1.1	1.0	1.0	1.1	.9	1.0	.9
Chemical .....	3.7	4.2	4.0	4.0	3.9	4.4	4.4	4.3	3.6	3.9
Civil .....	4.4	4.3	4.5	4.5	4.2	4.3	4.0	3.7	3.4	3.5
Electrical .....	9.2	8.9	8.9	9.5	9.5	9.0	9.2	8.9	8.6	9.9
Industrial .....	1.3	1.5	1.4	1.3	1.6	1.3	1.4	1.4	1.4	1.1
Materials/metallurgical .....	3.0	2.8	3.0	3.0	3.2	2.9	2.9	2.8	2.6	2.2
Mechanical .....	6.2	6.5	6.6	6.1	5.9	5.4	5.4	5.5	4.7	5.4
Other engineering .....	4.9	3.8	3.9	3.7	3.8	4.2	3.7	3.7	3.9	3.9
Sciences, total .....	66.2	66.7	66.6	66.9	66.9	67.5	67.8	68.7	70.8	69.2
Physical sciences, total .....	16.1	16.3	15.4	16.1	15.6	15.1	14.8	15.5	15.4	15.0
Astronomy .....	.4	.4	.4	.4	.5	.5	.4	.7	.5	.6
Chemistry .....	9.0	8.9	8.2	8.7	8.4	8.4	8.2	8.5	8.7	8.5
Physics .....	6.6	7.0	6.7	6.9	6.6	6.2	6.1	6.2	6.1	5.8
Other physical sciences .....	.1	.1	.1	.1	.1	.0	.0	.1	.1	.1
Earth, atmospheric, and ocean sciences .....	2.4	2.9	2.8	2.9	2.8	2.8	3.1	2.8	3.3	2.6
Mathematics .....	6.3	6.0	6.3	5.7	5.7	5.5	5.5	5.5	5.7	5.5
Computer sciences .....	4.5	4.6	4.4	4.4	4.7	4.3	4.3	4.2	4.5	4.8
Biological sciences .....	14.2	14.8	15.9	16.4	17.2	19.0	19.5	19.2	19.7	19.4
Agricultural sciences .....	5.5	5.6	5.1	5.2	5.1	5.0	4.8	5.5	5.7	5.2
Psychology .....	2.2	2.6	2.4	2.2	2.5	2.6	2.3	2.7	2.5	2.6
Social sciences .....	14.9	14.1	14.3	14.0	13.3	13.1	13.5	13.2	13.9	14.1

See explanatory information, if any, and SOURCE at end of table.

**Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1991-2000**

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Field of study	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Non-U.S. citizens with permanent visas										
Science and engineering, total .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total .....	30.2	29.7	28.6	27.7	27.2	26.4	26.0	23.8	24.4	24.8
Aeronautical/astronautical .....	.9	.6	.4	.7	.4	.6	.6	.5	.5	.7
Chemical .....	4.0	4.3	3.2	2.9	2.6	2.4	3.9	2.3	2.3	3.0
Civil .....	3.1	3.7	3.6	2.9	2.9	3.1	3.4	2.5	3.1	2.9
Electrical .....	10.3	8.8	10.1	8.8	8.2	7.3	8.2	8.2	7.7	8.2
Industrial .....	1.4	1.4	1.0	1.0	1.2	1.0	.7	.8	.8	.7
Materials/metallurgical .....	2.3	2.5	2.4	2.6	3.2	3.1	1.9	2.4	2.1	1.6
Mechanical .....	4.8	5.4	5.3	5.9	5.1	5.1	3.6	4.1	3.9	4.0
Other engineering .....	3.5	3.0	2.7	2.9	3.6	3.8	3.7	2.8	3.9	3.8
Sciences, total .....	69.8	70.3	71.4	72.3	72.8	73.6	74.0	76.2	75.6	75.2
Physical sciences, total .....	14.0	14.5	14.4	19.6	20.1	16.4	16.1	15.5	14.6	14.1
Astronomy .....	.2	.4	.3	.3	.6	.4	.3	.7	.4	.9
Chemistry .....	8.6	8.2	7.8	10.8	11.0	9.7	9.0	8.9	9.1	8.5
Physics .....	5.3	5.9	6.2	8.4	8.4	6.2	6.7	5.8	5.1	4.7
Other physical sciences .....	.0	.0	.1	.1	.1	.0	.1	.1	.1	.1
Earth, atmospheric, and ocean sciences .....	2.0	2.5	2.5	3.5	3.3	3.2	3.1	3.1	3.1	2.4
Mathematics .....	4.3	3.8	5.7	5.1	6.2	5.3	4.3	4.6	4.0	3.9
Computer sciences .....	4.9	4.8	5.1	3.9	3.8	3.1	4.0	4.2	4.3	5.0
Biological sciences .....	16.4	17.4	18.5	22.0	23.8	27.2	25.6	27.3	28.1	25.9
Agricultural sciences .....	4.4	4.5	3.0	3.2	3.0	3.4	3.6	3.9	3.1	3.9
Psychology .....	5.1	6.2	5.5	2.8	2.9	3.5	3.9	4.6	4.2	5.3
Social sciences .....	18.8	16.6	16.7	12.2	9.7	11.7	13.4	13.0	14.2	14.5
Non-U.S. citizens with temporary visas										
Science and engineering, total .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total .....	34.5	33.9	34.3	35.3	36.1	34.8	34.0	33.2	30.3	32.0
Aeronautical/astronautical .....	1.2	1.4	1.2	1.3	1.3	1.2	1.3	.9	1.1	1.0
Chemical .....	3.7	4.2	4.1	4.5	4.5	5.1	4.6	4.8	3.9	4.0
Civil .....	4.6	4.4	4.7	5.1	4.8	4.7	4.1	4.1	3.5	3.7
Electrical .....	9.0	9.0	8.7	9.8	10.2	9.6	9.5	9.1	8.8	10.2
Industrial .....	1.2	1.5	1.5	1.4	1.9	1.5	1.6	1.5	1.5	1.2
Materials/metallurgical .....	3.2	2.9	3.1	3.1	3.2	2.8	3.2	2.9	2.7	2.4
Mechanical .....	6.5	6.6	6.8	6.1	6.2	5.5	6.0	5.8	4.9	5.6
Other engineering .....	5.1	4.0	4.2	4.0	3.9	4.4	3.7	4.0	3.9	3.9
Sciences, total .....	65.5	66.1	65.7	64.7	63.9	65.2	66.0	66.8	69.7	68.0
Physical sciences, total .....	16.5	16.6	15.6	14.7	13.3	14.6	14.4	15.5	15.6	15.1
Astronomy .....	.5	.3	.4	.4	.4	.5	.5	.7	.5	.6
Chemistry .....	9.0	9.0	8.3	7.9	7.0	7.9	8.0	8.5	8.6	8.5
Physics .....	6.9	7.2	6.8	6.3	5.7	6.2	5.9	6.3	6.4	6.0
Other physical sciences .....	.1	.1	.0	.1	.1	.0	.0	.1	.1	.1
Earth, atmospheric, and ocean sciences .....	2.4	2.9	2.9	2.6	2.5	2.6	3.1	2.8	3.3	2.6
Mathematics .....	6.6	6.3	6.4	6.0	5.5	5.7	5.9	5.7	6.1	5.8
Computer sciences .....	4.4	4.5	4.3	4.6	5.2	4.8	4.4	4.2	4.6	4.7
Biological sciences .....	13.9	14.3	15.4	14.1	13.8	15.9	17.6	17.1	17.8	18.2
Agricultural sciences .....	5.7	5.8	5.5	6.0	6.1	5.6	5.2	5.9	6.3	5.4
Psychology .....	1.7	1.9	1.8	2.0	2.3	2.3	1.8	2.2	2.1	2.1
Social sciences .....	14.3	13.6	13.9	14.8	15.1	13.6	13.6	13.3	13.9	14.0

See explanatory information, if any, and SOURCE at end of table.

**Table 4a. Percentage distribution of science and engineering doctorates awarded,  
by major field and citizenship status of recipients: 1991-2000**

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Field of study	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Citizenship unknown										
Science and engineering, total .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total .....	22.9	27.3	28.7	23.3	26.1	25.3	17.4	23.9	21.4	26.0
Aeronautical/astronautical .....	.4	3.0	1.2	.8	.9	1.3	.6	1.6	1.0	1.0
Chemical .....	2.4	1.2	3.2	1.8	1.7	1.0	1.1	2.3	1.7	3.0
Civil .....	1.9	3.4	2.2	1.4	1.8	2.9	1.4	2.9	1.6	1.4
Electrical .....	6.2	6.1	5.9	7.8	8.8	8.0	5.4	6.6	6.3	9.8
Industrial .....	.6	.6	.8	.0	.7	.8	.7	.6	.4	.5
Materials/metallurgical .....	1.7	2.5	2.5	1.8	2.4	2.0	1.7	1.9	1.4	2.1
Mechanical .....	4.9	3.6	5.5	3.6	4.6	4.2	2.7	4.2	3.2	3.0
Other engineering .....	4.7	6.9	7.3	6.0	5.1	5.0	3.9	3.7	5.8	5.2
Sciences, total .....	77.1	72.7	71.3	76.7	73.9	74.7	82.6	76.1	78.6	74.0
Physical sciences, total .....	14.7	12.2	14.0	16.3	12.8	16.3	14.0	13.4	14.7	13.5
Astronomy .....	.4	.0	.0	.0	.7	.1	.2	.6	.4	.3
Chemistry .....	9.4	6.9	8.2	8.9	8.3	9.3	8.2	7.3	8.6	8.4
Physics .....	4.7	5.0	5.7	6.6	3.9	6.9	5.4	5.4	5.7	4.7
Other physical sciences .....	.2	.3	.1	.8	.0	.0	.2	.1	.0	.1
Earth, atmospheric, and ocean sciences .....	2.6	2.7	4.2	2.8	2.4	4.0	3.1	2.9	3.3	3.6
Mathematics .....	3.2	6.2	5.2	2.6	6.8	4.1	3.9	4.8	2.9	3.0
Computer sciences .....	1.9	2.3	3.0	3.4	2.9	4.0	4.4	3.0	3.2	3.3
Biological sciences .....	14.1	11.2	12.4	11.5	14.3	15.1	15.8	16.4	14.9	16.2
Agricultural sciences .....	3.8	2.8	2.0	1.8	1.7	2.6	3.0	2.5	1.2	2.1
Psychology .....	21.2	18.9	14.7	18.5	14.9	10.5	22.1	18.6	21.9	18.8
Social sciences .....	15.6	16.4	15.9	19.7	18.2	18.4	16.2	14.4	16.6	13.5

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Earned Doctorates